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NEBRASKA

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Lincoln/Lancaster County, NE GIS Master Plan Focus Sessions

City of Lincoln, NE

June 23 - 24, 2005

10:30-12:00 AM

Presented by:

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Agenda

- Introductions
- Purpose of Focus Sessions
- Overview of Master Plan
- Discussion of Key Workflows
- Prioritization of Data and Application Development
- Identifying Return on Investment
- Next Steps

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Purpose of Focus Sessions

- Present overview of information collected in the draft Master Plan
- Interactively identify areas to more fully develop the Strategic Implementation Plan
- Interactively review several key work flows and ways these should be streamlined
- Discuss prioritization of data and application development
- Prepare and present an overview of the Master Plan Project to City and County Executives

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Overview of Draft Master Plan

- Executive Summary – This portion of the Master Plan is to be an overview that can be provided to anyone to give them an understanding of the Master Planning Project and the direction of the City of Lincoln and Lancaster County Enterprise GIS Program

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Section 1 : Introduction

- Brief Background
- List of Participants and the Departments they represent
- Organization of the Document

Section 2: Current GIS Assessment

- Twenty-One different entities were interviewed and/or provided data to the Assessment

- Organizational Charts depict those participating in the City and County

- Detailed descriptions of work activities and current and potential GIS uses are described

- Data sharing with other entities is visually illustrated
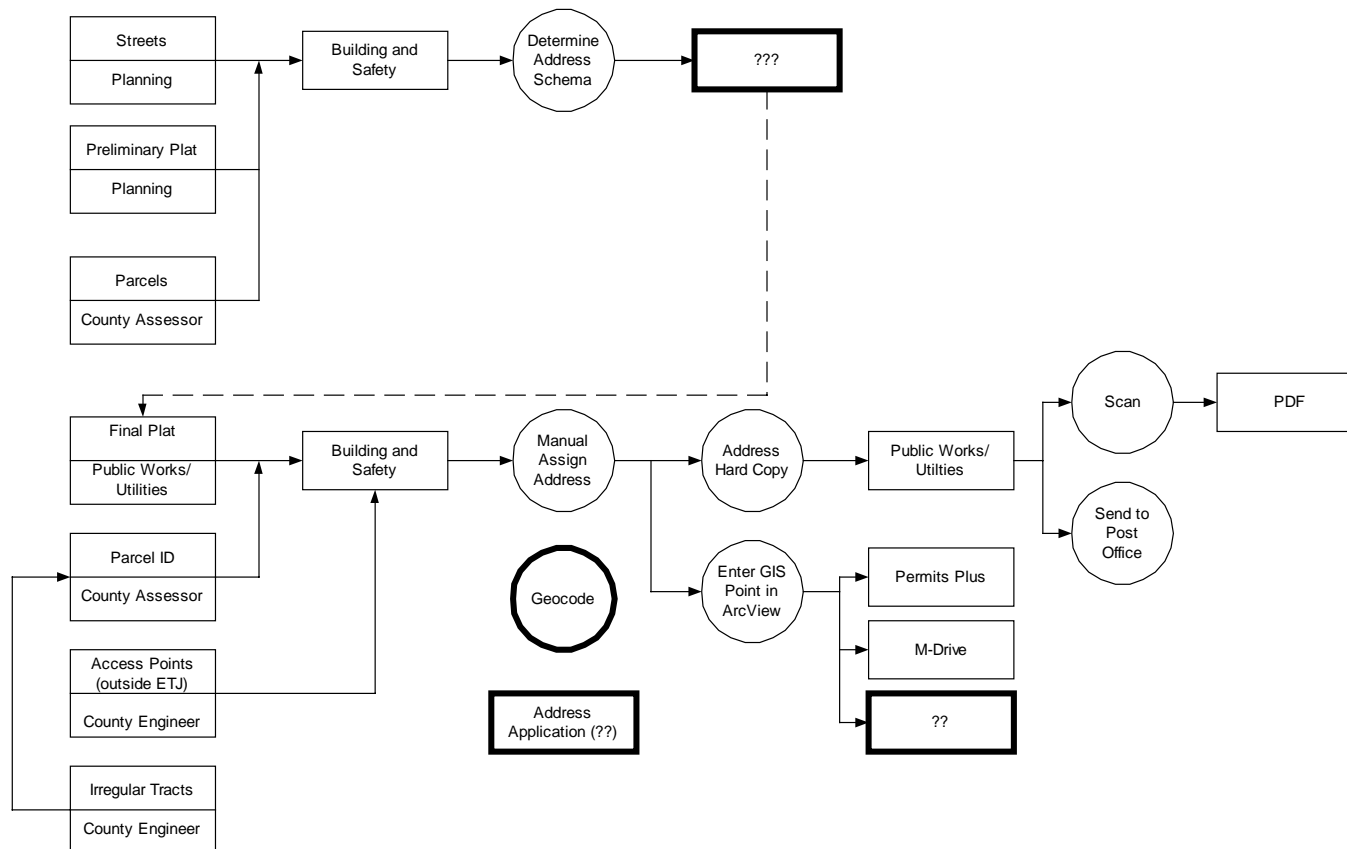
Section 2: Current GIS Assessment – Discussion Topics

- City and County data "developers" primarily expressed needs for improving data and related workflows, such as for the landbase

- Most GIS Planning project participants have a fairly functional capability in the use of ESRI and other software

- Custom application development was not often requested

- New application needs related primarily to needs for extension or third party software, training, or additional staff time

- There are LOTS of people/departments using ArcGIS and ArcView. Enterprise management of licenses could provide cost avoidance.
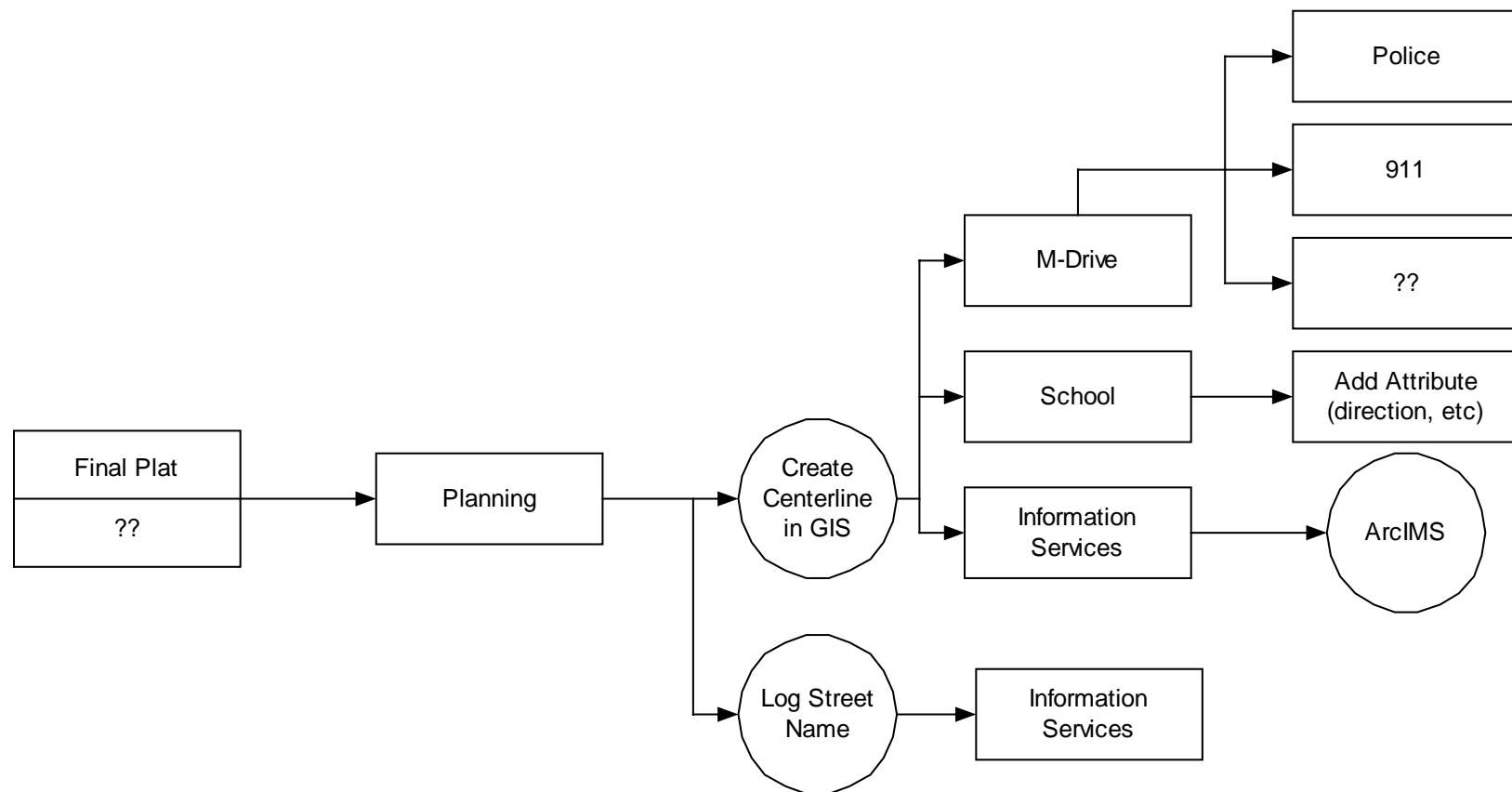
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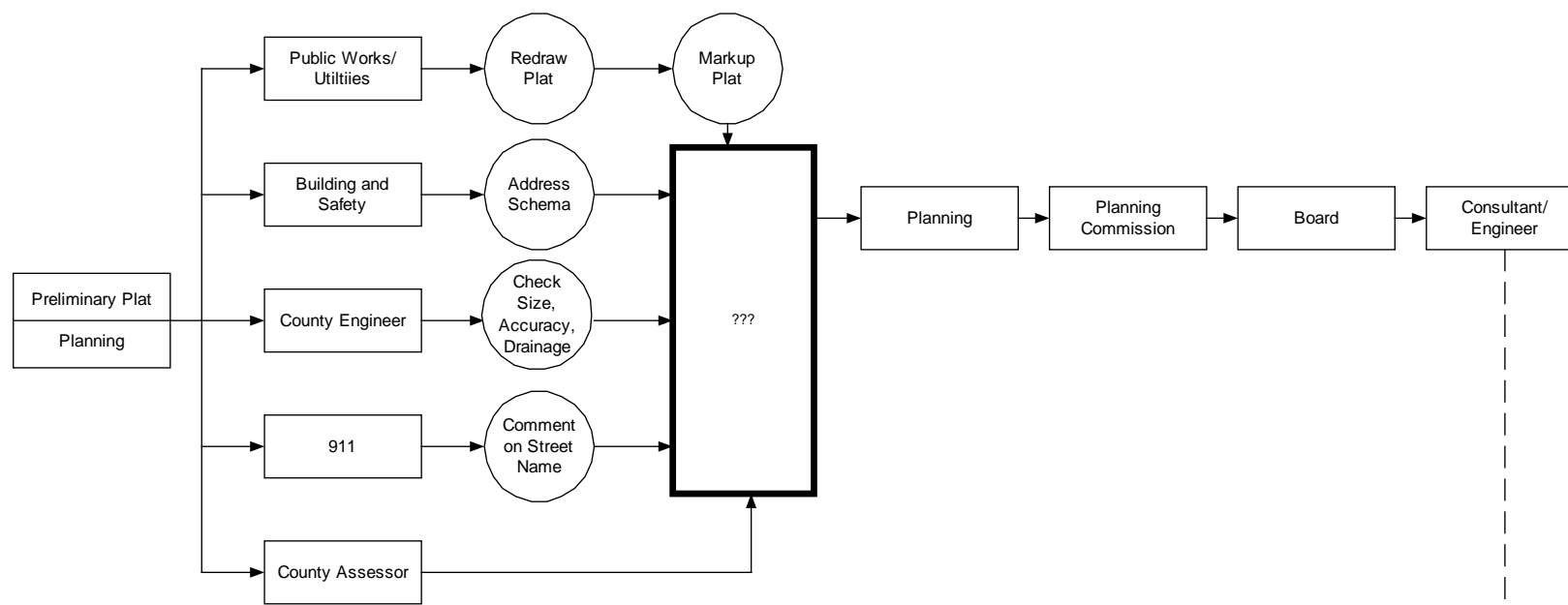# Section 2: Needs Assessment, Key Workflows

Address Assignment

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Flowchart:

- Streets / Planning
- Preliminary Plat / Planning
- Parcels / County Assessor

→ Building and Safety → Determine Address Schema → ???

- Final Plat / Public Works/ Utilities
- Parcel ID / County Assessor
- Access Points (outside ETJ) / County Engineer
- Irregular Tracts / County Engineer

→ Building and Safety → Manual Assign Address → Address Hard Copy → Public Works/ Utilties → Scan → PDF

→ Send to Post Office

Geocode

Address Application (??)

Manual Assign Address → Enter GIS Point in ArcView → Permits Plus

→ M-Drive

→ ??

Centerline Creation and Enhancements

```
Final Plat          Planning          Create            M-Drive           Police
??                                    Centerline
                                      in GIS            School            911

                                                        Information       ??
                                                        Services
                                                                          Add Attribute
                                                                          (direction, etc)

                                      Log Street        Information       ArcIMS
                                      Name              Services
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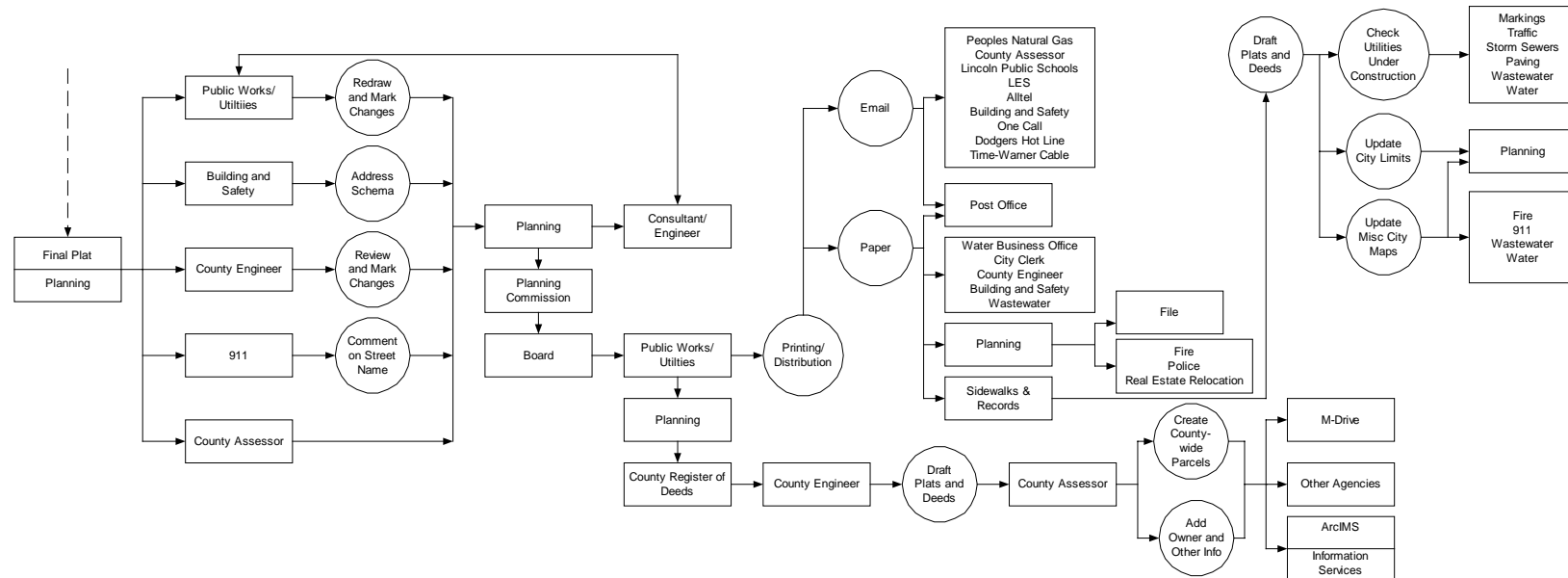
Platting and Landbase Development

Platting and Landbase Development, continued

Section 3: Overview of Existing Systems

- Tabulates software systems used by each participating department
- Overviews current software
- Tabulates Maps and Drawings used
- Tabulates Tabular Data used

Section 3: Overview of Existing Systems, Discussion Topics

- We've assumed that ISD will support servers and networking

- While they also support software components in overall system architecture, some departments would like more flexibility to enhance ArcIMS applications on their own

- Planning migration of key data to an enterprise database requires identification of:
  - What data should be migrated?
  - What should the priorities be?

Section 4: Conceptual Design

- Currently includes a placeholder for a system architecture
- Software architecture provides a general overview of software uses.
- General overview of application areas
- Refers reader to Technical Memorandum for Organizational Structure
- Identifies management areas related to the system where standards should be documented and defined if they are not already.

Section 4: Conceptual Design, Discussion Topics

- Is the assumption of ISD's responsibilities correct? If so, how much detail on hardware and ArcIMS architecture is to be included in Master Plan?

- How much more detail on software is necessary given that ESRI presented this?

- Lincoln/Lancaster County specifics need to be added to Applications area

- Should details be pulled from the Technical Memo or should it be left as an Appendix?

- Are there any formal IT practices in place to be referenced?

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Section 5: Implementation Strategy

- Three Phase Approach:
    - Initiation Phase
    - Implementation Phase
    - Operations Phase

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Initiation Phase

- Develop Interlocal Agreements
- Hire identified staffing
- Create Technical Committee
- Identify potential funding participants
  - "Consortium" type – other governmental entities
  - Private entities
- Design Enterprise Database

Initiation Phase discussion topics

- How long does it take to revise the interlocal agreement
- Can a position be created in Planning for the GIS Coordinator before the Interlocal is in place?
- How does the group feel funding should be shared?
- What policies should be described with the Interlocal?
- What capacity does the City and County have to support the database design? Can this be started before the Interlocal is in place?

Implementation Phase

- Organization
  - Training and staff development is key
- Hardware and Software expansions may be necessary
- Application development may fall into several broad categories
- Development of the database is still a primary effort

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Implementation Phase Discussion Topics

- Is there a general training approach that should be used as a model?

- What are the constraints associated with training?

- How much detail should be placed on hardware and software implementation?

- Should custom applications be a focus? How should the development of these be put into place?

- As the implementation unfolds, what policies should be put into place?

- While we identified three workflows to potentially streamline, what procedures will the enterprise follow to make on-going improvements?

Operations Phase

- Ongoing data maintenance
- Systematic upgrades to hardware, software and networking
- Application development

Operations Phase Discussion Topics

- What should be done to manage software licensing in a cost effective fashion?

- Who should be allowed to do custom application development?

- How should policies and standards be revised?

- How are projects distinguished from new application development in the operational workflow?

Section 6: Barriers and Opportunities

- Presents some general thoughts on barriers and opportunities faced by the City of Lincoln and Lancaster County

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Section 6: Barriers and Opportunities

- What are the most critical risks that the Enterprise GIS development faces?

- What is the Return on Investment that the Enterprise can generate?

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Return on Investment Matters for IT Projects

- 44% of IT spending is associated with with ROI (CIO Insight, March 2002)

- 82% of IT decisions require ROI analysis (Information Week, 2005)

- 9% of IT CFO's report using ROI (CFO IT, September 2004)

What is ROI?

- ROI=Total Benefits / Total Costs
- ROI= Average Annual Operating Cash Inflow (benefits) / Net Investment
- ROI= Incremental Gain in Investment/ Cost of the Action

ROI Application Problems

- Early investment costs and later returns / benefits
- Time period of analysis
- Discount rate
- Costs and Benefits to include:
  - Cost reduction
  - Cost avoidance
  - Strategic benefits
  - Other non-quantifiable returns

ROI is only one component of a comprehensive business case

- Magnitude of returns
- Risk/Sensitivity
- Time value of money
- Feasibility

What to measure?

- Payback or break even period
- Net present value
- Internal Rate of Return (IRR)
- Simple ROI

ROI Inputs

- Recurring Costs
  - IT Support Systems
    - Personnel
    - Non-Personnel
  - Spatial Data Management
    - Personnel
    - Non-Personnel
- Non-recurring costs
  - IT Support Systems: Non-personnel
  - Spatial Data Management: Non-personnel
- Alternatives

Next Steps

- Post presentation materials on web-site
- Have Master Plan and Technical Memo edited and published on website
- Develop forms for identifying data sources and data priorities
- Develop forms for collecting ROI information
- Collect comments on Master Plan
- Incorporate comments and extend Master Plan
- Provide Plan to Committee for final review
- Present final GIS Master Plan to Committee, Executives, and other stakeholders.